

INTERNATIONAL SEARCH REPORT

International Application No
PCT/DE2005/000428

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L31/0216 H01L31/068

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 820 915 A (HAMAKAWA ET AL) 11 April 1989 (1989-04-11) the whole document	1-29
X	US 5 406 067 A (KELLER ET AL) 11 April 1995 (1995-04-11) the whole document	5-29
X	US 4 451 691 A (FRAAS ET AL) 29 May 1984 (1984-05-29) abstract	3,5,11
X	US 4 713 493 A (OVSHINSKY ET AL) 15 December 1987 (1987-12-15) abstract	1-4
X	EP 0 509 215 A (CANON KABUSHIKI KAISHA) 21 October 1992 (1992-10-21) abstract	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- "&" document member of the same patent family

Date of the actual completion of the International search

13 July 2005

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27/07/2005

Name and mailing address of the ISA

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4820915	A	11-04-1989	JP	1828218 C	15-03-1994
			JP	63094125 A	25-04-1988
US 5406067	A	11-04-1995	JP	2762390 B2	04-06-1998
			JP	7318423 A	08-12-1995
US 4451691	A	29-05-1984	US	4404421 A	13-09-1983
			AU	559708 B2	19-03-1987
			AU	1169883 A	01-09-1983
			CA	1207422 A1	08-07-1986
			DE	3306725 A1	22-09-1983
			ES	8406797 A1	01-11-1984
			ES	8503891 A1	16-06-1985
			FR	2522444 A1	02-09-1983
			GB	2116365 A , B	21-09-1983
			IL	67982 A	31-08-1986
			IN	158004 A1	16-08-1986
			NL	8300715 A	16-09-1983
			JP	1682389 C	31-07-1992
			JP	3048672 B	25-07-1991
			JP	58180071 A	21-10-1983
US 4713493	A	15-12-1987	US	4642413 A	10-02-1987
			AT	92212 T	15-08-1993
			AU	6350886 A	16-04-1987
			CA	1268973 A1	15-05-1990
			DE	3688772 D1	02-09-1993
			DE	3688772 T2	11-11-1993
			EP	0218997 A2	22-04-1987
			IN	166970 A1	11-08-1990
			JP	2752924 B2	18-05-1998
			JP	8056007 A	27-02-1996
			JP	2575667 B2	29-01-1997
			JP	62093982 A	30-04-1987
			KR	9500109 B1	09-01-1995
EP 0509215	A	21-10-1992	JP	2999280 B2	17-01-2000
			JP	4267568 A	24-09-1992
			DE	69212367 D1	29-08-1996
			DE	69212367 T2	02-01-1997
			EP	0509215 A1	21-10-1992
			US	5279679 A	18-01-1994

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US 5406067	A	11-04-1995	JP 2762390 B2 JP 7318423 A	04-06-1998 08-12-1995
US 4451691	A	29-05-1984	US 4404421 A AU 559708 B2 AU 1169883 A CA 1207422 A1 DE 3306725 A1 ES 8406797 A1 ES 8503891 A1 FR 2522444 A1 GB 2116365 A ,B IL 67982 A IN 158004 A1 NL 8300715 A JP 1682389 C JP 3048672 B JP 58180071 A	13-09-1983 19-03-1987 01-09-1983 08-07-1986 22-09-1983 01-11-1984 16-06-1985 02-09-1983 21-09-1983 31-08-1986 16-08-1986 16-09-1983 31-07-1992 25-07-1991 21-10-1983
US 4713493	A	15-12-1987	US 4642413 A AT 92212 T AU 6350886 A CA 1268973 A1 DE 3688772 D1 DE 3688772 T2 EP 0218997 A2 IN 166970 A1 JP 2752924 B2 JP 8056007 A JP 2575667 B2 JP 62093982 A KR 9500109 B1	10-02-1987 15-08-1993 16-04-1987 15-05-1990 02-09-1993 11-11-1993 22-04-1987 11-08-1990 18-05-1998 27-02-1996 29-01-1997 30-04-1987 09-01-1995
EP 0509215	A	21-10-1992	JP 2999280 B2 JP 4267568 A DE 69212367 D1 DE 69212367 T2 EP 0509215 A1 US 5279679 A	17-01-2000 24-09-1992 29-08-1996 02-01-1997 21-10-1992 18-01-1994